DOCUMENT RESUME

ED 412 874 HE 030 666

| | |
|---|---|
| AUTHOR | Grayson, J. Paul |
| TITLE | Who Goes Where? An Exploratory Study of Recent York Graduates. |
| INSTITUTION | York Univ., Toronto (Ontario). Inst. for Social Research. |
| ISBN | ISBN-1-55014-340-9 |
| PUB DATE | 1997-09-00 |
| NOTE | 30p. |
| AVAILABLE FROM | Institute for Social Research, York University, 4700 Keele Street, North York, Ontario, Canada M3J 1P3. |
| PUB TYPE | Reports - Research (143) |
| EDRS PRICE | MF01/PC02 Plus Postage. |
| DESCRIPTORS | Academic Achievement; College Students; Educational Assessment; Educational Attainment; Followup Studies; Foreign Countries; Graduate Study; Higher Education; Labor Force; *Outcomes of Education; *Student Attitudes; Student Characteristics; Student Educational Objectives; Student Surveys; Surveys |
| IDENTIFIERS | *York University ON |

ABSTRACT

Surveys were conducted to examine the post-college plans of York University (Canada) graduates of the Faculties of Arts, Fine Arts, Pure and Applied Science and the Schulich School of Business. The first survey population included all bachelor's degree candidates who had graduated in fall of 1995 and the second involved all June 1996 graduates; the response rate was 51 percent. The survey included questions about: respondents preferences or destinations for the coming year; family income, ethnic/racial origin, birth date, gender, and academic standing; institutional experiences both in and out of classroom and coursework and curricular patterns; community and social activities; and general satisfaction with the academic experience at York. Data on grade point averages was obtained from administrative records. Almost half the respondents reported that they hoped to be in the labor force in the year after graduation. Of the remainder, approximately 5 percent planned to attend graduate school at York University and almost 25 percent planned to attend another postsecondary institution. Overall, disciplinary major was the best indicator of whether or not students would pursue further education. (Contains 10 references). (JLS)

**********
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
**********

ED 412 874

INSTITUTE FOR SOCIAL RESEARCH

# WHO GOES WHERE: AN EXPLORATORY STUDY OF RECENT YORK GRADUATES

J. PAUL GRAYSON

BEST COPY AVAILABLE

HE 030 666

BEST COPY AVAILABLE

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY

Institute for Social Research, York Univ

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

# WHO GOES WHERE?
# AN EXPLORATORY STUDY OF
# RECENT YORK GRADUATES

J. Paul Grayson
Institute for Social Research
York University

September 1997

© J. Paul Grayson, 1997

All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording, or any information storage or retrieval system, without permission in writing from the publisher.

Published by: **Institute for Social Research**
**York University**

ISBN: 1-55014-340-9

## Institute for Social Research

Founded in 1965, the Institute for Social Research (ISR) is an Organized Research Unit of York University. The Institute's purpose is to promote, undertake and critically evaluate applied social research. The Institute provides consultation and support services to York faculty, students and staff conducting research in the social sciences, and, to a lesser extent, in the biological and physical sciences. For researchers from other universities, government agencies, public organizations and the private sector, the Institute provides consultation on research design and undertakes data collection, data processing and statistical analysis, on a fee-for-service basis.

ISR houses the largest university-based survey research unit in Canada, annually conducting twenty to thirty research projects ranging from small surveys in one locale to provincial and national surveys. The capabilities of the Institute include questionnaire and sample design, sample selection, data collection, preparation of machine-readable data files, statistical analysis and report writing.

ISR's Statistical Consulting Service provides consultation on research design and statistical analysis. The Service also sponsors short courses on statistical analysis, research methodology and the use of statistical software. The consulting service is partially supported by a grant from the Natural Science and Engineering Research Council (NSERC).

ISR's data archive provides public access to survey data collected by the Institute, to data sets from major Canadian surveys, and to official statistics, such as the census aggregate and public-use microdata files from the Canadian Census.

For more information, write to:

**Institute for Social Research**
**York University**
**4700 Keele Street**
**North York, Ontario, Canada M3J 1P3**
Telephone: (416) 736-5061; Fax (416) 736-5749

## Foreword

The Institute for Social Research produces four types of articles in its publication series:

- Working papers;
- Reports on various technical and managerial aspects of the research process designed for technical support staff and research managers;
- Reports on topics of general interest to non-specialist readers; and,
- Reports on various methodological and substantive issues aimed at experts in the field.

*The following is a working paper. Comments are welcome.*

## Acknowledgements

A number of individuals at the ISR contributed to various phases of the research on which the following report is based. In no particular order I would like to thank: Tammy Chi, Darla Rhyne, and David Northrup for their assistance in data collection; John Tibert, Bill Bruce, and Anne Oram for file preparation; Anne Oram for proof reading; and Mike Ornstein for assistance in statistical methodology. I would also like to thank Linda Grayson for comments on an earlier draft of the report.

## Other Publications on York Students

Using Surveys to Measure Value Added in Four Faculties
*J. Paul Grayson (1997)*

Who Gets Jobs? Initial Labour Market Experiences of York Graduates
*J. Paul Grayson (1997)*

Racial Origin and Withdrawal From University
*J. Paul Grayson (1997)*

Under- and Over-Achievement in First Year
*J. Paul Grayson (1996)*

The Retention of First Year Students in Atkinson College: Institutional Failure or Student Choice?
*J. Paul Grayson (1996)*

Value Added in Generic Skills Between First and Final Year: A Pilot Project
*J. Paul Grayson (1996)*

Race and First Year Retention on a Canadian Campus
*J. Paul Grayson (1996)*

Place of Residence and First Year Marks
*J. Paul Grayson (1995)*

The College-University Linkage: An Examination of Transfer Students in the Faculty of Arts at York University
*Stephen Bell (1995)*

The First Generation at York University
*J. Paul Grayson (1995)*

The Health of First Year Students
*J. Paul Grayson (1995)*

Globe and Mail Reports, Student Experiences, and Negative Racial Encounters
*J. Paul Grayson (1995)*

Comparative First Year Experiences at York University: Science, Arts and Atkinson
*J. Paul Grayson (1994)*

A Characterization of Areas of Racial Tension Among First Year Students: A Focus Group Follow-Up to a Large Survey
*J. Paul Grayson (1994)*

Race on Campus: Outcomes of the First Year Experience at York University
*J. Paul Grayson (1994)*

'Racialization' and Black Student Identity at York University
*J. Paul Grayson with Deanna Williams (1994)*

The Social Construction of 'Visible Minority' for Students of Chinese Origin
*J. Paul Grayson with Tammy Chi and Darla Rhyne (1994)*

Who Leaves Science? - The First Year Experience at York University
*J. Paul Grayson (1994)*

The Characteristics, Needs, and Expectations of Students Entering York University
*J. Paul Grayson (1993)*

Gender and Minority Group Differences in Desired Outcomes of Adult Post-Secondary Education: The Student Perspective
*J. Paul Grayson (1993)*

Outcomes and Experiences of First Year Science in Two Universities
*J. Paul Grayson (1993)*

Improving First Year Science Education in a Commuter University
*J. Paul Grayson (1993)*

The Experience of Female and Minority Students in First Year Science
*J. Paul Grayson (1993)*

Response Effects: Variations in University Students' Satisfaction by Method of Data Collection
*David A. Northrup and Michael Ornstein (1993)*

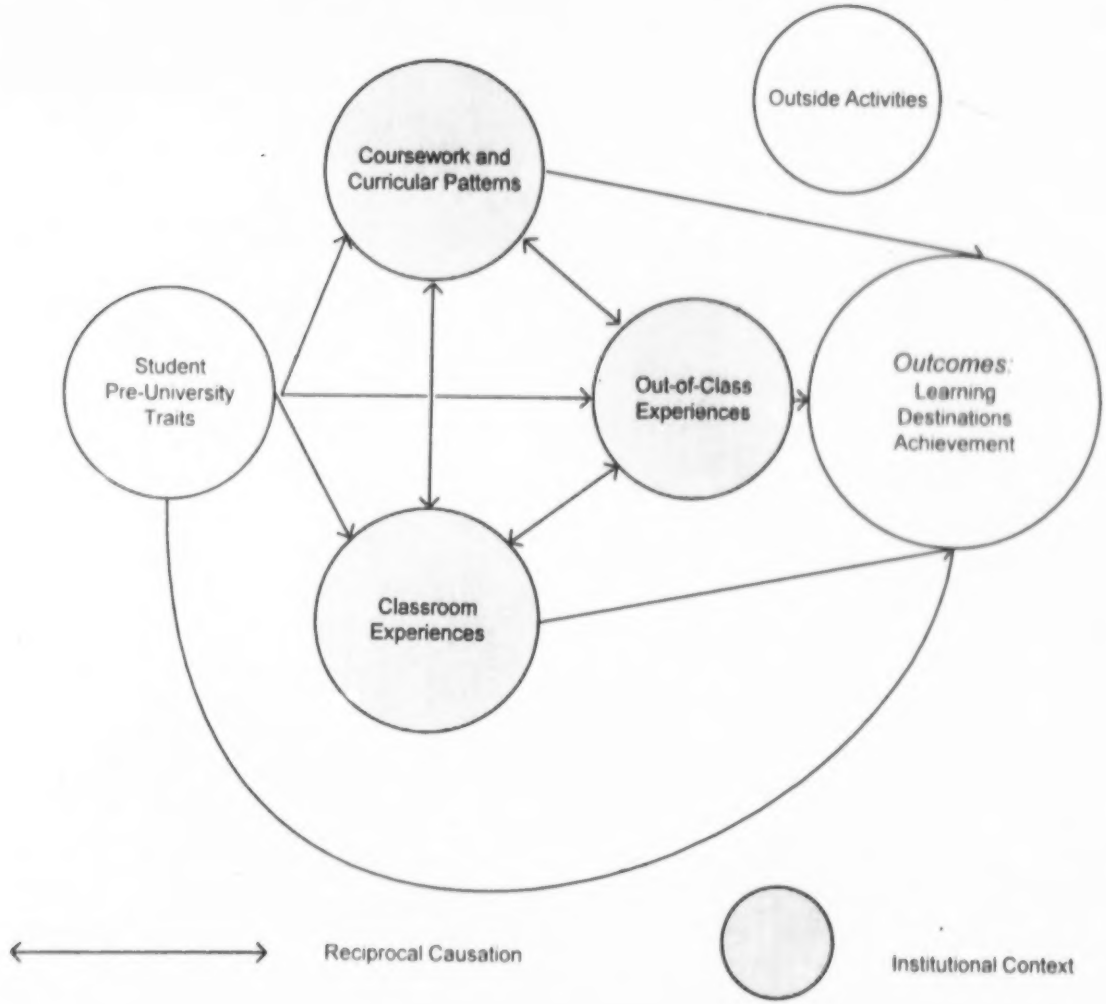
Student Withdrawals at York University: First and Second Year Students, 1984-85
*Gordon Darroch, David A. Northrup and Mirka Ondrack (1989)*

## Summary

In the Fall of 1995 and Spring of 1996 surveys were carried out with graduates of the Faculties of Arts, Fine Arts, Pure and Applied Science, and the Schulich School of Business at York University. One of the objectives of the surveys was to examine the plans of graduates for the following year.

Almost one half of the graduates hoped to be in the labour force in the coming year. Among the remainder, approximately 5% planned to attend a graduate school at York and almost a quarter intended to attend another post-secondary institution. Overall, among pre-university traits, institutional experiences, and university outcomes such as GPA, disciplinary major was the best indicator of whether or not graduates would pursue further education.

## Diagram 1: Extended Model of University Impact*




*Unextended model from Terenzini & Associates, 1996





BEST COPY AVAILABLE

## Introduction

An increasing number of Canadian universities are carrying out surveys of their graduates (Evers and O'Hara, 1996:43). While the objectives of such surveys vary, many obtain information on graduates' plans for the future. For example, in a national study carried out in 1992 of 1990 graduates, Statistics Canada found that 49% of those studied registered in a new educational program after graduation (Lapierre and Little, 1996:52).

Studies of individual institutions have found that similar percentages of graduates continue their education. For example, in a Fall 1995 study of 1993 B.A. graduates from universities in British Columbia, it was discovered that 51% pursued additional higher education (BCU, 1996:6). When surveyed in 1996, 40% of those graduating in 1990 from the University of Alberta reported that they had continued their education (Murphy and Coffin, 1996:4). At York University, a 1996 survey of recent B.A. graduates revealed that approximately half intended to pursue further education.

While many graduates are continuing their education, little is known in Canada of how students who opt for additional studies compare to those who enter the job market. Do graduates with further educational plans tend to be males? Are they from different economic and ethno-racial backgrounds than those who start work? What about their experiences while in university? Do those of students who aspire to more education differ from those entering the job market? Do graduates who continue their studies come from particular faculties? Are their marks higher than those of other graduates and do they have better generic skills? This report will focus on these and other questions as they relate to recent graduates of York University.

## Perspectives

The general logic that will be applied to the examination of graduates' preferences or destinations for the coming year is outlined in an extension of the 'model of university impact' articulated by Terenzini and Associates (1996) - Diagram 1. In brief, the model postulates that with student pre-university traits, such as parental education, held constant, course work and curricular patterns, classroom experiences, and out-of-class experiences (that collectively can be viewed as institutional experiences), contribute to various learning outcomes. The important concept of 'outside activities', that would include job commitments, has been added to the model.

While the original model focussed on only one outcome, 'learning', 'achievement' (GPA) and 'destinations' (what the graduate hopes to be doing in the next year) have been added to the outcomes category. Within this category, it is obvious that both learning and academic achievement may have an impact on destinations. As in this report the model will be used as an organizing principle in an attempt to understand graduates' educational plans, analysis will focus on destinations.

Although the links in the model will not be specified in detail, its logic will become apparent as analysis unfolds. In general, it can be hypothesized that the desire to continue one's education

(one set of possible destinations) is a manifestation of a value, all else being equal, that would be promoted and/or sustained through certain institutionally based experiences. Via the process of reinforcement, positive learning outcomes and academic achievement might also contribute to a desire to continue one's education. Heavy involvement in activities outside of the university, particularly work, is likely to detract from this objective.

**Table 1: Destinations of York Graduates[a]**

| | |
|---|---|
| Job Market | 45.8% |
| York Honours or Education | 6.8% |
| York Graduate School | 5.2% |
| Other Education Institution | 22.6% |
| Other | 5.5% |
| Combination | 14.1% |
| Total | 100.0% |
| | 2177 |

a. Q. What best describes what you hope to be doing over the next year?

Many of the variables included in the model are measures of student academic and social involvement (Astin, 1985:133). As Kuh (1995:125) states in elaboration of the concept of involvement, "the more time and energy students expend in educationally purposeful activities, the more they benefit." Some of the relevant purposeful activities are participating in classroom endeavours, engaging in out-of-class activities such as student councils, and socializing with university based friends. The known benefits of forms of involvement such as these include intellectual and social development (Pascarella and Terenzini, 1991).

## The Sample

Information for the current report was collected in two mail surveys of graduates from the faculties of Arts, Fine Arts, and Science and from the Schulich School of Business at York University. The first included all bachelors' candidates who graduated in the November convocation of 1995; the second involved all graduates from the same faculties who received their bachelor's degrees in June, 1996.

The 2,177 graduates who participated in the study represent a response rate of 51%. As there were no differences between Fall 1995 and Spring 1996 graduates in the percentages of individuals who continued with their studies, survey results can be pooled.

## Destinations

As can be seen from Table 1, 45.8% of the total sample can be classified as hoping to be in the

labour market in the coming year.[1] At the time of the surveys, of this number (i.e. of those in the labour market), 43.5% already had full-time jobs, 14.5% were working part-time by preference, 17.7% were working part-time because they could not get full-time jobs, 18.4% said they were unemployed and looking for full-time work, 2.0% were unemployed and looking for part-time work, and 4.3% reported other work related activities.

Table 1 also indicates that 6.8% of York graduates intended to either complete an honours degree or enter the education program at York. An additional 5.2% expected to enter a York graduate program. Those hoping to go to another educational institution represented 22.6% of all York graduates. The ultimate destination of this group (community college, graduate school, professional school) will be determined in follow-up surveys. 'Other' activities were indicated by 5.5% of respondents and 14.1% of graduates said that they would be doing a combination of things in the coming year.

## Pre-University Characteristics

As shown in the model in Diagram 1, the anticipated activities or destinations of graduates were examined in terms of five pre-university traits: family income, ethno-racial origin[2], birth date, gender, and Ontario Academic Credit marks (OAC). When this was done, no sociologically meaningful differences emerged based on parental income or age. Differences based on ethno-racial origin, gender, and OAC marks, however, were sociologically meaningful and statistically significant.

While only 45.8% of all graduates hoped to be in the labour market in the coming year, the figure for students of Chinese origin was 70.8%. Whereas 6.8% of all graduates reported that they would be pursuing an honours or education degree at York, 9.0% of graduates of South Asian origin chose this option. While 5.1% of the total sample stated that they hoped to attend a graduate program at York, 12.8% of Black graduates expressed this preference.

Slightly more males, 50.4%, than females, 43.6%, hoped to be in the labour force. Conversely, slightly more females, 7.6%, than males, 5.2%, intended to complete an honours or education degree at York. Finally, whereas only 10.7% of males replied that they intended to do a combination of things in the coming year, 15.6% of females chose this option.

Graduates most likely to aspire to the job market were those who entered university with the *highest* OAC marks - 80% and above. Of this group, 48.6% expressed the intention of being in the labour market. The fewest aspirants to the labour market, 43.1%, were found among students with the lowest OAC marks - 73% and lower. Of those with marks between 74% and 79%, 45.9% hoped to be in the job market. Clearly, success in high school as measured by marks does

---

[1]This number is higher than reported in an earlier report (Grayson, 1997a) because for purposes of the earlier report graduates reporting a 'combination' or 'other' activities were assumed to have some labor force responsibilities and were classified accordingly.

[2]The Canadian Census categories were used in this study.

not later translate into a desire to pursue education beyond the B.A.

Overall, the data on pre-university characteristics suggest few differences in destinations based on family income and age, slight differences based on gender and OAC marks, and considerable differences associated with ethno-racial origin.

## Institutional Experiences

Student involvement in academic and social activities may contribute to positive learning outcomes and perhaps the desire for more education. In Diagram 1, involvement such as this is included in the 'classroom', 'out-of-class experience', and 'coursework and curricular patterns' categories.

Three measures of classroom experience at York were examined: frequency of weekly lecture and class/tutorial/lab attendance; number of visits to the library in the final month of school; and frequency of out-of-class interactions with faculty. Although library use may be viewed as an out-of-class activity, in this analysis it will be placed in the classroom experiences category because without the classroom connection it is highly unlikely that there would be any library use. The same logic applies to contacts with faculty outside of the classroom. As a result, with respect to the last mentioned, in the current study, attention will focus on: number of contacts with faculty over the previous two months to discuss plans related to future occupations; number of contacts with faculty over the previous two months to get basic information or advice about finding a job; and the degree to which students agree that if they had problems there was at least one faculty member to whom they could turn for help. All of these measures of classroom experiences can be viewed as manifestations of academic involvement.

Activities that fall in the out-of-class experiences category include: non-required activities like attending guest lecturers in the two months preceding the survey; number of clubs and/or organizations to which former students belonged; number of monthly visits to campus pubs; number of organized and unorganized sports in which graduates participated, and number of sports watched, since September; number of cultural activities in which students were involved, and number of cultural events attended, since September; and number of new friends made since starting York and the hours per week spent with these friends. With the exception of the first mentioned, each can be seen as a measure of social involvement.

Unfortunately, the only 'coursework and curricular patterns' measures available for analysis were field of specialization and whether the graduate earned an ordinary or an honours degree. Information on each came from administrative records.

### Classroom Experiences

Overall, there is a connection between lecture and tutorial etc. attendance and destinations. Among those who attended 100% of their lectures, only 39.9% aspired to the labour force in the coming year while the figure for those who went to 94% or fewer of their lectures was 51.1%.

Among graduates attending from 95% to 99% of their lectures, an intermediate number, 48.2%, wanted to be in the labour market.

While 26.5% and 7.0% of students who attended all of their lectures wanted to go to another educational institution and York graduate schools respectively, only 19.3% and 4.5% of the low attendance group (94% and lower) had the same objectives.

A similar pattern was found when attendance at tutorials, labs, and studios was examined. While only 40.8% of those going to 100% of such activities wanted to be in the labour market, 51.9% of graduates who went to 90% or fewer of their tutorials etc. hoped to be in the labour market. In addition, whereas 6.3% of students in the high attendance group aspired to graduate school at York, the same was true of only 3.6% of students who attended 90% or less of their tutorials etc.

Only 41.3% of students making 15 or more visits to the library wanted to be in the labour force in the coming year. The figure for former students making six or fewer visits was 50.7%. Of students in the middle group, those visiting the library seven to 14 times, an intermediate 45.1% wanted to be in the labour force.

In general, it is evident that there is a modest yet positive relationship between attending lectures and tutorials and using the library and the desire upon graduation to pursue additional educational options. It is difficult to say, however, whether class attendance and library use inspired students to pursue more education or whether students inclined to further education were committed to greater class attendance and library use. Possibly, both were at work.

Overall, 45.8% and 30.6% of graduates respectively reported contacts with faculty to discuss plans related to future occupations and to get basic information about finding a job. While differences in destinations based on the former were both socially and statistically significant, for the latter, they were neither.

Whereas 50.2% of graduates who reported no contacts to discuss plans hoped to be in the job market in the following year, only 40.9% of students reporting one or more contacts had this objective. Conversely, whereas only 2.9% of graduates with no such contacts aspired to graduate school at York, the corresponding figure for those with one or more contacts was 8.2%. Similarly, while 20.6% of students with no contacts to discuss plans related to future occupations reported the desire to attend another post-secondary institution the corresponding figure for graduates having at least one contact was 25.7%. It seems like contact of this nature with faculty may have a modest impact on desire to pursue additional post-secondary education. At the same time it could be that students with such aspirations seek out faculty in order to get their opinions.

Overall, 26.0% of graduates disagree that there was at least one professor to whom they could turn for help, 18.1% neither agreed nor disagreed (they were neutral, which may indicate they had no such person to contact), and 55.9% said that they did have a professor to whom they could turn for help if they had problems. Socially and statistically meaningful differences exist between those who on the one hand disagree that they had a professor to whom they could turn for help and those who express either neutrality or agree that they had such a relationship. For example, while 50.5% of graduates who disagree that there was a professor to whom they could

turn for help aspired to the job market, the respective figures for graduates who were neutral or who agreed that they had this kind of relationship were 41.6% and 43.9%. Whereas only 19.0% of graduates disagreeing that they had such a relationship aspired to another educational institution, the figures for the neutral and agree responses were 25.7% and 24.2% respectively.

Taken together, the findings relating to graduates' interactions with faculty suggest that former students who report contacts with faculty and who view faculty as approachable are slightly more inclined to pursue additional education than other students. In essence, from the point of view of pursuing further education, faculty contacts have a modest positive impact.

In general, findings reported in this section suggest that there is a modest relationship between forms of academic involvement that can be placed in the classroom experiences category and the desire to pursue further education.

## Out-of-Class Experiences

Overall, there is no statistically or socially relevant relationship between the number of voluntary academic activities in which graduates participated and whether or not they aspired to further education. In essence, academic involvement of this nature outside of the classroom nexus likely does not incline graduates to pursue further education.

When measures of out-of-class experiences qualifying as forms of social involvement were examined, only number of clubs and /or organizations to which the student belonged, and the number of formal sports in which graduates had participated, had socially and statistically significant relationships with anticipated destinations in the coming year. Overall, 32.1% of graduates indicated that they belonged to at least one club/organization. Of these individuals 43.5% wanted to be in the labour force compared to 47.0% with no such memberships. More importantly, among the former, 27.5% had plans for a post secondary school other than York. The corresponding figure for non-members was a slightly lower 20.5%.

The pattern is similar for graduates who had participated in organized sports. Overall, 11.1% indicated that they had participated in such activities. Among these, 40.3% stated a preference for the labour market compared to 46.4% among non-participants. In addition, while 32.4% of sports participants intended to go to an educational institution other than York, only 21.5% of non-participants had the same ambition.

Collectively, these findings suggest that with the exception of club/organizational and organized sports involvement, out-of-class activities have no impact on graduates' destinations. Moreover, the effect of club/organizational and sports involvement is modest.

## Course Work and Curricular Patterns

Of the two measures of course work and curricular patterns that were available, having an ordinary or honours degree bore no statistically significant relationship to destinations. However, as seen in Table 2, there are considerable differences in destinations based on area of specialization.

Most evident, perhaps, is that in business related departments and computer science 71.4% and 71.7% respectively hoped to be in the labour market in the coming year. This pattern no doubt reflects the market demand for individuals with skills developed in these departments. (Indeed, it was seen in an earlier report (Grayson, 1997a) that three months after getting their degrees graduates' from these disciplines, as well as those from dance, film, and theatre, were more likely than others to report full-time employment.) At the other end of the spectrum it is equally evident that a minority of graduates of humanities subjects, 37.9%, languages and literature, 42.7%, and from sciences other than computer science, 41.7%, expected to be in the labour market in the coming year.

Also noticeable from Table 2 is that graduates of some departments are far more likely than others to say that in the coming year they hope to attend another post-secondary institution. Students from sciences other than computer science, 38.3%, and physical education, 35.1%, stand out in terms of the percentages of graduates choosing this option. By way of comparison, only 7.9% of graduates of business related departments, 7.5% from computer science, and 8.6% from dance, film, and theatre hoped to attend educational institutions other than York.

From information on area of specialization it is fair to say that course work and curricular patterns have a substantial impact on students' destinations. This pattern may in large part be a reflection not of socialization that occurs in such departments but of employment prospects for graduates.

## Outside Activities

As noted earlier, commitment to outside activities, including work, may affect future plans in two ways. First, integration into outside activities may sustain patterns of socialization that are antithetical to further education. Second, outside activities may simply cut into the time that is available for on-campus socialization into values consistent with pursuing further education. Third, outside activities like work may open the door for future employment: as a result, students may choose not to pursue additional education.

While it is not possible to explore these possibilities in depth, whether or not graduates worked in the last year of school, the numbers of hours they committed to employment, and whether or not they engaged in volunteer work can be examined in relation to destinations.

It turns out that there is no socially or statistically meaningful relationship between having worked in the last year of school and plans for the following year. There is, however, a

**Table 2: Destinations by Major Subject**

| | | Plans for Following Year | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | Job Market | York Honours or Education | York Graduate School | Other Education Institution | Other | Combination | Group Total |
| Major Subject | Business Related | 71.4% | 1.6% | 5.6% | 7.9% | 8.7% | 4.8% | 100.0% |
| | | 90 | 2 | 7 | 10 | 11 | 6 | 126 |
| | Social Sciences | 43.0% | 7.9% | 5.8% | 22.9% | 5.3% | 15.2% | 100.0% |
| | | 492 | 90 | 66 | 262 | 61 | 174 | 1145 |
| | Humanities | 37.9% | 8.7% | 5.1% | 26.8% | 5.1% | 16.3% | 100.0% |
| | | 140 | 32 | 19 | 99 | 19 | 60 | 369 |
| | Languages and Linguistics | 42.7% | 6.8% | 3.4% | 28.2% | 2.6% | 16.2% | 100.0% |
| | | 50 | 8 | 4 | 33 | 3 | 19 | 117 |
| | Math and Statistics | 60.0% | 5.0% | 5.0% | 22.5% | 5.0% | 2.5% | 100.0% |
| | | 24 | 2 | 2 | 9 | 2 | 1 | 40 |
| | Computer Science | 71.7% | 7.5% | 3.8% | 7.5% | 1.9% | 7.5% | 100.0% |
| | | 38 | 4 | 2 | 4 | 1 | 4 | 53 |
| | Other Sciences | 41.7% | 5.0% | 6.7% | 38.3% | 3.3% | 5.0% | 100.0% |
| | | 25 | 3 | 4 | 23 | 2 | 3 | 60 |
| | Physical Education | 42.9% | 2.6% | 2.6% | 35.1% | 2.6% | 14.3% | 100.0% |
| | | 33 | 2 | 2 | 27 | 2 | 11 | 77 |
| | Dance, Film, and Theatre | 58.6% | 4.3% | | 8.6% | 14% | 14.3% | 100.0% |
| | | 41 | 3 | | 6 | 10 | 10 | 70 |
| | Fine and Visual Art, Cultural Studies, and Music | 53.8% | 2.8% | 5.7% | 14.2% | 8.5% | 15.1% | 100.0% |
| | | 57 | 3 | 6 | 15 | 9 | 16 | 106 |
| Group Total | | 45.8% | 6.9% | 5.2% | 22.6% | 5.5% | 14.1% | 100.0% |
| | | 990 | 149 | 112 | 488 | 120 | 304 | 2163 |

Chi-square sig LT .001

connection between hours per week of work and the intention to attend another educational institution in the coming year. Among students working 14 or fewer hours per week 26.0% reported this objective. The percentages for students who worked 15 to 20, and 21 or more hours respectively were 23.0% and 18.6% respectively. Differences in other categories of destinations were small.

The relationship between commitment to volunteer activities was different than the above: of students who reported having done volunteer work, 27.1% wanted to attend another educational institution in the following year compared to 19.3% who did no volunteer work. Conversely, whereas only 38.5% of those who did volunteer work wanted to be in the labour force, the figure for recent students who did no such work was 51.4%.

While it is difficult to determine cause and effect in the foregoing, it is clear nonetheless that there is a modest relationship between working only a few hours and continuing one's education. Also, graduates who reported volunteer work were more likely than others to have the objective of continuing their education. This being the case, outside activities can be viewed as having potentially both positive and negative relationships with the desire to continue education beyond the B.A.

## Learning Outcomes and GPA

Among learning outcomes that may in part be attributed to the university experience survey data made it possible to analyse graduates' analytic, personal, organizing, comparative, basic numeracy, basic computer, and communication skills (see Grayson, 1997b for a description and analysis of these skills). Information on cumulative grade point averages (GPA) was obtained from administrative records.

Although an earlier analysis has shown that at York the university experience makes a positive contribution to the skills listed above, when students were divided on each of the skills into three roughly equal high, medium, and low groups, there were no statistically significant differences between skill levels and destinations. In one instance, however, there was a socially meaningful difference. Among graduates in the bottom third in terms of organizing skills, 50.7% hoped to be in the labour market. The figures for the middle and top groups were 46.9% and 41.9% respectively. The percentages hoping to go to another educational institution for the bottom, middle, and top thirds were 19.4%, 22.0%, and 25.2% respectively. In essence, although statistically not significant, the data suggest that students entering the labour force may have lower organizing skills than those choosing other options.

In order to assess the possible link between GPA and destinations, as seen in Table 3, students were divided into three roughly equal groups in terms of GPA. Table data suggest a clear and statistically significant link between GPA and hopes for the future year.

Among high GPA students (GE 6.5) 41.4% opted for the labour force, 9.6% for graduate school at York, and 25.9% for another educational institution. The corresponding figures for the middle GPA group (5.4 to 6.4) were 44.6%, 5.1%, and 23.8% respectively. For this group then,

**Table 3: Destinations by GPA**

| | | Plans for Following Year | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | Job Market | York Honours or Education | York Graduate School | Other Education Institution | Other | Combination | Group Total |
| GPA | LE 5.3 | 50.2% | 8.4% | 1.6% | 18.4% | 4.4% | 17.0% | 100.0% |
| | | 352 | 59 | 11 | 129 | 31 | 119 | 701 |
| | 5.4 to 6.4 | 44.6% | 7.3% | 5.1% | 23.8% | 4.4% | 14.7% | 100.0% |
| | | 324 | 53 | 37 | 173 | 32 | 107 | 726 |
| | GE 6.5 | 41.4% | 4.9% | 9.6% | 25.9% | 7.4% | 10.8% | 100.0% |
| | | 273 | 32 | 63 | 171 | 49 | 71 | 659 |
| Group Total | | 45.5% | 6.9% | 5.3% | 22.7% | 5.4% | 14.2% | 100.0% |
| | | 949 | 144 | 111 | 473 | 112 | 297 | 2086 |

Chi-square sig. LT .001

aspirations for the labour force increase while those for further education decrease. For the low GPA group (LE 5.3) aspirations for the labour force increase to 50.2% while those wanting to go to a graduate program at York and to another educational institution decrease further to 1.6% and 18.4% respectively. It should also be noted that the intention to do a 'combination' of things varies slightly with GPA: 17.0%, 14.7%, and 10.8% of low, medium, and high GPA earners respectively choose this option.

To a large degree, figures such as these suggest that future plans may be related to reasonable options defined in terms of GPA. For example, with a GPA LE 5.3 it is unlikely that a graduate would be able to gain admission to a graduate school. As a result, it is not surprising that so few in this group aspire to a York graduate program. By the same logic it is understandable that 9.6% of the high GPA group have this objective. Despite these observations, as large numbers of students with low GPAs intend to either return for an honours degree or to go to another educational institution (perhaps a community college) it is clear that even students with relatively low GPAs do not see their B.A. as the end of the educational road.

## Program Satisfaction

Although not part of the model in Diagram 1, it was thought that satisfaction with the academic experience at York might have consequences for graduates' plans. As a result, destinations were analysed in relation to graduates' satisfaction with their undergraduate academic programs. When this was done a statistically significant yet difficult to explain pattern emerged. For example, those most likely to aspire to the labour market were neither satisfied nor dissatisfied with their academic program, they were neutral: in order of presentation, the numbers of labour force aspirants for the three groups are 44.6% (for the satisfied), 41.6% (for the dissatisfied), and 54.9% (for the neutral). At the same time, as might be expected, 2.0%, 4.0%, and 6.1% of the dissatisfied, neutral, and satisfied respectively expressed a desire to attend a graduate program at York. Perhaps in interaction with other variables under consideration the impact of program satisfaction will be more interpretable.



BEST COPY AVAILABLE

## The Overall Picture

The foregoing analysis has revealed that a number of different factors affect graduates' destinations. Now we can examine the combined effect of the variables on two destinations: continuing one's education compared to entering the job market. Logistic regression is a statistical technique that can help in this task.

From among the single variables found to be significant in the explanation of whether or not graduates' pursue additional education logistic regression allows us to determine the effect of any one variable (such as GPA) after the effects of other variables (like family income and having a part-time job during school) have been removed. For example, as we saw, male graduates and those who did not talk to faculty about future careers and jobs were less likely than others to continue their education. It might be, however, that the reason that male graduates are relatively unlikely to continue their education is not because they are male, but because few of them socialize with faculty. By using logistic regression we will be able to determine if this is the case.

Logistic regression has the further advantage of being able to provide researchers with estimates of the probability that individuals with certain characteristics will continue their education. For example, it was seen that a graduate who had no contacts with faculty to discuss future plans was less likely to have a full-time job than a graduate who did have out-of-class interactions with faculty. On the basis of information such as this the logistic regression procedure involves the derivation of some general rules regarding the probability of graduates with specific characteristics pursuing or not pursuing further education. Once these rules have been formulated, they are tested by re-examining the same graduates and comparing the prediction of how many would say that they will continue their education based on characteristics, such as gender, to the number who actually report that they will continue their education. If large numbers of graduates predicted to continue their education are found to actually say that they intend to seek further education (later this will be referred to as the percent correctly predicted), we can be fairly confident that we have selected important variables in explaining who continues their education.

## Regression Analysis

In the preceding analysis, the following variables had a statistically significant relationship to destinations for the coming year:

- Ethno-racial origin (pre-university characteristic)
- Gender (pre-university characteristic)
- OAC marks (pre-university characteristic)
- Lecture attendance (classroom experience)

- Tutorial, lab, and studio attendance (classroom experience)
- Library use (classroom experience)
- Contacting faculty to discuss plans for future jobs or careers (classroom experience)
- Having a faculty member to whom one can turn for help (classroom experience)
- Belonging to campus clubs and organizations (out-of-class experience)
- Participating in organized sports (out-of-class experience)
- Area of concentration or major (coursework and curricular patterns)
- Hours of work while in school (outside activities)
- Being a volunteer (outside activities)
- GPA (outcome)
- Satisfaction with the academic program (other)

In order to assess the independent effects of these variables all were used in a procedure in which graduates who said they were continuing their education were coded 1 and those who intended to be in the labour force were coded 0. Graduates who identified 'other' or a 'combination' of destinations were removed from the analysis. As a result, 1,751 cases were available for analysis; however, with listwise deletion, only 733 cases were used in the regression.

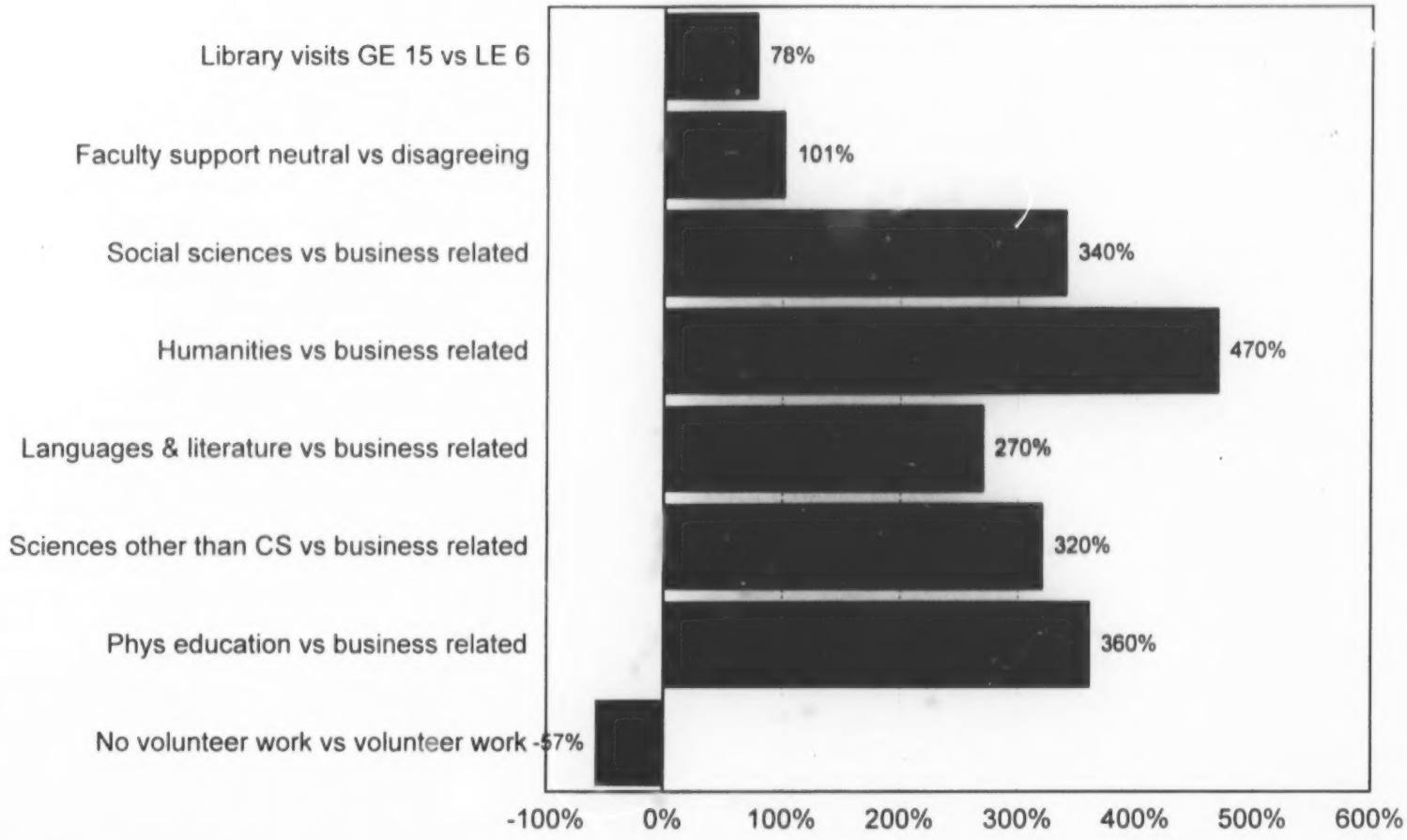
Because of the relatively high number of independent variables relative to total number of cases used in the analysis, and the data loss due to listwise deletion, the results of the procedure are best viewed as exploratory. Consistent with the exploratory nature of this procedure, only statistically significant variables will be identified and discussed.

The variables found to have a statistically significant relationship to continuing one's education are found in Graph 1. The percentages associated with each of these variables indicate the increase in the likelihood that the individual having the characteristic will state continuing his/her education as a destination. For example, with all other variables in the regression controlled (including the non-statistically significant ones not represented in the chart) compared to individuals making six or fewer visits to the library in the last month of school, those going 15 or more times were 78% more likely to indicate that they were continuing their education.

From the graph it is evident that no pre-university characteristics (such as OAC marks or gender) or out-of-class experiences (like club membership or participating in organized sports) were statistically significant. In essence, background characteristics and socialization that may have occurred in activities outside the classroom did not incline graduates to pursue further education.

There were, however, two variables classified as classroom experiences that contributed to the desire to continue one's education. The first was making a large number of visits to the library; the second, being neutral regarding having a faculty member to whom one could turn for help.

Graph 1: Increase in odds of continuing education vs entering labour force for significant variables



Graduates who make 15 or more visits to the library were 78% more likely to express the desire for further education than those using the library six or fewer times in the final month of school; students who were neutral regarding expectations of faculty help were 101% more likely to aspire to further education than students disagreeing that there was a faculty member to whom they could turn for help. It is likely, however, that former students intending to pursue further studies were motivated to use the library rather than library use leading to the desire to seek more educational opportunities. As we might expect that students agreeing that they could rely on a faculty member for help (rather than those in the neutral category) would be more likely to continue their education, the second finding is difficult to interpret.

It is very clear from the graph that the majority of variables affecting the desire to continue one's studies can be placed in the course work and curricular patterns category. For example, with all other variables in the regression controlled, graduates of humanities subjects are 470% more likely than graduates of business related departments to say that they hoped to pursue additional education in the coming year. Similarly, graduates of the social sciences (340%), languages and literature (270%), sciences other than computer science (320%), and physical education (360%), were much more likely than graduates of business related departments to express a preference for additional education.

In the outside activities category of the model, not doing volunteer work is negatively related to the intent to obtain additional education. Graduates reporting no volunteer work while in their final year are 57% less likely than volunteers to aspire to additional education.

It is important to note that GPA was not statistically significant in the regression. In other words, high academic achievement does not automatically translate into the desire to continue one's education.

The model utilized in the analysis, including the non-significant variables not included in Chart 1, correctly predicts 72% of graduates entering the labour market and 61% of those continuing their education.

## Conclusion

At York University as at other Canadian universities, large numbers of B.A. graduates want to continue their education. From information on former York students collected just after convocation, consistent with expectations embodied in the model of university impact, it seems that the socialization that occurs through some forms of particularly academic involvement in the university may incline students to seek further education. By comparison, academic achievement as measured through GPA has no significant impact on the desire to pursue this objective. High achievers are just as likely as low achievers to look for a job.

In an earlier report it was shown that of students in the labour market at the time of the survey, relatively low rates of full-time employment were found among graduates of the social sciences, the humanities, and sciences other than computer science. While it may be the case that in departments in these areas socialization promoting a commitment to further education actually

takes place, we must also recognize that employment rates among graduates are relatively low. As a result, the desire of graduates to continue their education may be related to socialization, a realistic appraisal of chances in the labour market, or both. The fact that relatively few students from specializations in which the employment rate is high - business; computer science; and dance film, and theatre - continue their education is consistent with this interpretation.

It was previously noted that this is an exploratory examination of some of the factors and processes that might incline graduates to further their education. In order to examine fully the degree to which socialization and/or the realisation that for graduates of some disciplines limited job prospects are responsible for continuing education after the B.A., it would be necessary to determine career goals at the beginning of first year, if these goals change because of socialization in various departments and/or because of a perception of limited job opportunities, and choices made after graduation.

## References

Astin, A. (1985). *Achieving educational excellence*. San Francisco: Jossey Bass.

BCU (1996). *Two year follow-up survey of 1993 baccalaureate graduates from BC's public universities*. Prepared for the University Presidents' Council of British Columbia.

Evers, F. and O'Hara, S. (1996). Education outcome measures of knowledge, skills, and values. *Education Quarterly Review*, (31)1.

Grayson, J. (1997a). *Who gets jobs? Initial labour market experiences of York graduates*. Toronto: York University, Institute for Social Research.

Grayson, J. (1997b). *Using surveys to measure 'value added' in skills in four faculties*. Toronto: York University, Institute for Social Research.

Kuh, G. (1995). The other curriculum: out-of-class experiences associated with student learning and personal development. *The Journal of Higher Education*, 66, 123-155.

Lapierre, L. and Little, D. (1996). *The class of 90: a compendium of findings from the 1992 national graduates survey of 1990 graduates*. Prepared under contract to Human Resources Development Canada.

Murphy, J. and Coffin, W. (1996). *Survey of University of Alberta graduates of 1990*. Edmonton: University of Alberta.

Pascarella, E. and Terenzini, P. (1991). *How College affects students*. San Francisco: Jossey Bass.

Terenzini, P., Springer, L., Yaeger, P., Pascarella, E., & Nora, A. (1996). First-generation college students: characteristics, experiences, and cognitive development. *Research in Higher*

*Education*, 37, 1-22.

BEST COPY AVAILABLE